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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,793	10/01/2003	Hideyuki Oki	108426-00042	3672

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EXAMINER	
CYGAN, MICHAEL T	
ART UNIT	PAPER NUMBER
2855	

DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/674,793	OKI ET AL.	
	Examiner	Art Unit	
	Michael Cygan	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,6-8,11,12,14,16-24,26 and 28* is/are rejected.

7)☒ Claim(s) *3,5,9,10,13,15,25 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01 October 2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 17-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims recite "a computer program"; however, the specification discloses "performing operations in accordance with the programs stored in the ROM", see page 8. No single computer program for performing detecting, correcting, closing, and other claimed functions is found in the specification, which discloses only programs for performing operations with digital signals. Processing of digital signals (such as detecting pressure) and creation of control signals are disclosed to be separate steps from any operations performed "in accordance with the programs". Furthermore, "program code for detecting" is not enabled, since the programs do not detect; rather, the programs are disclosed only to perform operations with digital signals—the ECU performs detection and A/D functions. This rejection could be overcome by rewriting the claims to

properly set forth the specific functions of the programs and the functions of the ECU.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1, 11, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoff (JP 11-115774) in view of Mastandrea (US 4,852,054). Hoff teaches an apparatus and method for determining leakage in a fuel supply system of an automobile comprising a control system which detects an engine stop, closes the supply system, and performs a leakage diagnosis; see abstract. Hoff teaches the claimed invention except for correction of a determination value due to an atmospheric pressure and determining a leakage based upon the determination value and the system pressure.

   Mastandrea teaches the use of separate sensors for measuring system [61] and atmospheric pressure [66] in an apparatus for determining

leakage in a fuel system, and the use of detected atmospheric pressure data in a processing system to correct a determination value used in leakage determination; see abstract, column 15 lines 6-36 and column 19 line 35 through column 22 line 58. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use separate sensors having a correction scheme as taught by Mastandrea in the invention taught by Hoff to determine the leakage, since Mastandrea teaches that such a scheme is used to correct for nearly 33 problems commonly found in pressure leak testing systems; see column 6 lines 43-58.

3. Claims 1, 2, 4, 11, 12, 14, 23, 24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoff (JP 11-115774) in view of Chirco (US 5,644,072). Hoff teaches an apparatus and method for determining leakage in a fuel supply system of an automobile comprising a control system which detects an engine stop, closes the supply system, and performs a leakage diagnosis; see abstract. Hoff teaches the claimed invention except for correction of a determination value due to an atmospheric pressure and determining a leakage based upon the determination value and the system pressure.

Chirco teaches an apparatus and method for using the apparatus in a vehicle fuel system leak detection, comprising a pressure sensor for sensing changes in the system pressure, a known atmospheric pressure (inherently,

through measurement with a sensor), an adjustable regulator providing the test pressure, the magnitude of which is adjusted in accordance with the known atmospheric pressure according to a correction chart in order to determine the leak status (pass/fail) of the system; see abstract, Figure 12, column 5 lines 3-24, column 7 line 35 through column 8 line 64, and column 9 line 58 through column 11 line 37. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use separate sensors having a correction scheme as taught by Chirco in the invention taught by Hoff to determine leakage, since Chirco teaches advantages of automatic operation and accuracy; see column 2 line 66 through column 64.

4. Claims 6-8, 16, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook (US 6,343,505) in view of Mastandrea (US 4,852,054). Cook teaches an apparatus for determining leakage in an evaporated fuel system, comprising a sensor [74] for measuring atmospheric and system pressures, a control unit [16] which detects an engine stop (see abstract), close the fuel system (column 8 lines 28+), and determine leakage from the measured pressure values by monitoring a change in the corrected pressure and determining if the change is less than the determination value (column 5 lines 1-19). Such correction of the system pressure is provided by the differential pressure sensor arrangement, and inherently lowers the pressure as the atmospheric pressure decreases. The method of and means

for performing the above steps is also taught. See entire document, especially columns 5-8.

Cook teaches the claimed invention except for the use of two separate system and atmospheric pressure sensors. Mastandrea teaches the use of differential or separate sensors for measuring system and atmospheric pressure in an apparatus for determining leakage in a fuel system; see column 15 lines 6-36. It would have been obvious to use two separate system and atmospheric pressure sensors as taught by Mastandrea in the invention taught by Cook to measure and correct for atmospheric pressure, since Mastandrea teaches their equivalency and notes the high accuracy of the two-sensor system.

Allowable Subject Matter

5. Claims 3, 5, 9, 10, 13, 15, 25, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: the claims recite limitations neither disclosed nor fairly taught in the prior art.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miwa (US 6,192,742) discloses an atmospheric pressure correction using a look-up table to a leak test performed when an engine is not running. Kawamura (US 5,408,866) performs a leak diagnosis of an evaporative emission control system utilizing a look-up graph. Mieczkowski (US 5,763,764) and yamaki (US 6,477,889 B2) perform an atmospheric pressure correction of an evaporative emission control system. Denz (US 5,898,103) discloses an atmospheric pressure correction to a leak test performed when an engine is not running. Shigihama (US 6,357,288 B1) discloses a method of performing multiple sequential tests on an evaporation control system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is (571) 272-2175. The examiner can normally be reached on 8:30-6 M-Th, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Cygan
Primary Examiner
Art Unit 2855